

What is claimed is:

1. A filter cartridge comprising:
  - (a) an extension of filter media having an upstream surface and defining an internal volume;
  - (b) an liner/valve construction positioned along the upstream surface of the filter media; the liner/valve construction including:
    - (i) a support defining an interior and having at least a first aperture extending therethrough; and,
    - (ii) a flexible valve sheet operably positioned within the interior of the support between the support and the extension of filter media, with an upstream surface of the valve sheet directed toward the support; the flexible valve sheet including at least one deformable valve member oriented adjacent the first aperture, said valve member being deformable between:
      - (A) a first, open, orientation caused by a first opening fluid pressure against the upstream surface of the flexible valve sheet to allow contaminant flow through the liner/valve construction and to the filter media; and
      - (B) a second, closed, orientation to inhibit loss of contaminant from the filter cartridge; when fluid pressure against the upstream surface of the flexible valve sheet is below the first opening pressure.

2. A filter cartridge according to claim 1 wherein:
  - (a) the media is pleated and the liner/valve construction is positioned to circumscribe the filter media.
3. A filter cartridge according to any one of claims 1 and 2 wherein:
  - (a) the extension of filter media comprises a cylindrical extension of pleated media;
  - (b) the support is an outer perforated cylinder; and
  - (c) the flexible valve sheet comprises a sheet with each deformable valve member comprising a cut valve.
4. A filter cartridge according to any one of claims 1-3 wherein:
  - (a) the outer support includes at least 10 apertures therein; and,
  - (b) the flexible valve sheet includes at least 10 cut valves.
5. A filter cartridge according to claim 4.
  - (a) each aperture in the outer support is operably oriented adjacent a cut valve in the flexible valve sheet.
6. A filter cartridge according to any of claims 1-4 including:
  - (a) first and second opposite end caps;
    - (i) the extension of filter media being permanently secured in extension between the first and second end caps.

7. A filter cartridge according to claim 6 wherein:
  - (a) the liner/valve construction is permanently secured in extension between the first and second end caps.
8. A filter cartridge according to claim 6 wherein:
  - (a) the liner/valve construction is removeably secured in extension between the first and second end caps.
9. A filter cartridge according to claim 8 including:
  - (a) a first o-ring seal between the liner/valve construction and the first end cap; and,
  - (b) a second o-ring seal between the liner/valve construction and the second end cap.
10. A filter cartridge according to claim 4 wherein:
  - (a) the outer support includes an internal positioning rib having opposite sides; and,
  - (b) the flexible valve sheet has first and second side edges which are positioned to abut the opposite sides of the positioning rib.
11. A filter cartridge according to claim 10 wherein:
  - (a) the positioning rib is a continuous axial rib.

12. A filter cartridge according to claim 11 wherein:
  - (a) the opposite sides of the positioning rib are each undercut with an undercut angle of at least 1°.
13. A filter cartridge according to claim 10 wherein:
  - (a) each aperture in the outer support is circular and has a radius of at least 1 mm.
14. A filter cartridge according to claim 13 wherein:
  - (a) each cut valve is a u-shaped cut.
15. A filter cartridge according to claim 13 wherein:
  - (a) each cut valve is a circumferentially directed u-shaped cut.
16. A filter cartridge according to claim 13 wherein:
  - (a) each cut valve is a circumferentially directed curved u-shaped cut.
17. A filter cartridge according to claim 13 wherein:
  - (a) each cut valve is a circumferentially directed boxed u-shaped cut.
18. A filter cartridge according to claim 13 wherein:
  - (a) each cut valve associated with an aperture in the liner is a u-shaped cut having end terminii which define a line substantially tangential to the associated aperture in the liner.

19. A filter cartridge according to claim 13 wherein:

- (a) each cut valve associated with an aperture in the liner is a u-shaped cut having end terminii which define a chord of the associated aperture.

20. A filter cartridge according to claim 13 wherein:

- (a) each cut valve is a slit valve.

21. A method of forming a liner/valve construction for a filter cartridge; said method including steps of:

- (a) curling a flexible valve sheet; and,
- (b) positioning the flexible valve sheet inside of a porous tubular support.

22. A method according to claim 21 wherein said step of positioning further includes:

- (a) positioning the flexible valve sheet in a tubular support having an axial positioning rib therein, with opposite end edges of the flexible valve sheet abutting the positioning rib.

23. A method of servicing a liquid filter arrangement including a step of:

- (a) removing from the liquid filter arrangement, a filter cartridge according to any of claims 1-20 while the filter cartridge includes loaded contaminant positioned between the valve sheet and the filter media.